Social Program Management Software to Optimize Benefit Application and Management in New York City

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Introduction
City social service departments seek to support their clients with food, housing, and other essential benefits. To deliver these benefits, varied challenges such as increasing caseload volumes, budgetary constraints, labor-intensive processes, coordination of benefits across various channels, accessibility, and trust in government must be overcome. In order to improve services and outcomes for clients, social service departments constantly seek ways to improve the efficiency and accessibility of their operations.

The New York City Human Resources Administration/Department of Social Services (NYC HRA/DSS) is the largest social services agency in the United States. The NYC HRA/DSS employs more than 14,000 individuals to deliver 12 major public assistance programs with an operating budget of $9.7 billion. The population they serve consists of over 3 million residents who speak a variety of languages and hail from diverse ethnic backgrounds. Since food insecurity has been associated with health expenditures1 and adverse outcomes2, the NYC HRA/DSS elected to enhance its screening and application tool for Supplemental Nutrition Assistance Program (SNAP) benefits to provide greater configurability for reacting to policy changes, increase access to benefits, provide benefits more cost-effectively, and improve eligible individuals’ experiences and outcomes. NYC provides nutrition assistance for more than 1.6 million city clients each month, or approximately 4.5% of national SNAP recipients.

This retrospective analysis of factors associated with SNAP benefit screening, application preparation and submission, and application profile management was conducted to understand the impact of enhancing to a user-centered online self-service web/mobile application on SNAP benefit application adoption and efficiency.

Methods
An adapted design thinking methodology incorporating naturalistic shadowing sessions and contextual inquiry interviews was applied. Data were analyzed to identify and classify current system challenge themes. Co-creation sessions were used to resolve any discrepancies. The agreed upon system challenge themes were then addressed in interpretation sessions to inform the new system design.

IBM Social Program Management (SPM) utilizes the IBM SPM Platform and a set of configurable application modules. The SPM Platform consists of an extensible data model, an integrated administration application enabling system configuration, business services providing cross program functional support, and technical services providing the necessary infrastructure to support connectivity and security.

For this study, the SPM Platform operated in conjunction with the IBM Universal Access (UA) application module. This module provides users with access to features that help them to screen for programs, apply online for benefits, and manage their account information. Individuals apply for benefits online using UA by entering their name, date of birth, gender, phone number, email, address, income, expenses, and employment to automatically be registered with an evidence record. An application case is created by inserting evidence mapped from UA. April 2018 and April 2019 system data were pulled to conduct year-over-year metric analyses. Demographic data regarding NYC SNAP recipient characteristics show 66.5% are aged eighteen years or older, 57.3% are female, 17.9% have at least a high school degree, 73.7% are single / never married, and the diverse population has majority ethnicities of 27.8% Black African American and 24.4% White and Hispanic.

Results
As part of the adapted design thinking method, a total of five naturalistic shadowing sessions of 20 SNAP center clients and 37 SNAP center facilitators, lasting 3-5 hours each (25 total hours), were conducted at computer banks in
5 centers around the five boroughs of New York City. Additionally, thirty contextual inquiry interviews were conducted with SNAP center facilitators and outreach workers from community-based organizations to better understand current system challenges. Interpretation sessions identified 331 insights, including 116 specific issues and needs, which provided the foundation for design of the new user-centered system.

The user-centered enhanced system was made available in January 2019, continuing support for the seven languages (English, Spanish, Arabic, Chinese, Korean, Haitian Creole, and Russian) in the original system. Table 1 depicts the increases in logins, online applications and recertifications, document uploads, and profile update calls compared to the same month in the year prior to deployment. Consequently, application rejections due to failure to provide documentation were reduced by 20% and center visits by 37%.

Table 1. Monthly system metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>April 2018 Pre-deployment</th>
<th>April 2019 (% increase)</th>
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<tbody>
<tr>
<td>Logins (web + mobile)</td>
<td>915,532</td>
<td>1,684,248 (84)</td>
</tr>
<tr>
<td>Online applications/recertifications received</td>
<td>33,421</td>
<td>40,198 (20.3)</td>
</tr>
<tr>
<td>Document uploads</td>
<td>26,419</td>
<td>43,057 (63.0)</td>
</tr>
<tr>
<td>Profile update calls</td>
<td>9,696</td>
<td>17,547 (81)</td>
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</tbody>
</table>

As of August 2019, 80% of the approximately 30,000 total SNAP applications per month, are submitted via UA and 8,849 survey response reviews of the application have been received with an average rating of 4.31/5.

Discussion

This retrospective analysis demonstrates that digital tools implementing user-centered design can decrease social service department administrative workloads while simultaneously increasing digital access, efficiency, and growth in client-centered care. Sustained use of this digital tool may indicate increased user trust in this government service through greater transparency. Digital tool use frees more social services employee time for benefit coordination with those most in need of in-person support. Further, observed gains in efficiency are likely to contribute to maximizing the availability of benefits to all eligible clients. The size, composition, and urban focus of the population in this study likely limit extrapolation of these results to rural and smaller communities. However, the complexity, diversity, and size of the NYC SNAP program suggest that aspects of this work will be applicable in many communities. Future research analyzing user characteristics such as age, gender, race, and income, all of which have been associated with differential outcomes in previous SNAP technology adoption studies35, will be important for identifying the specific populations that benefit most from user-centered digital tools.

References


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